

## WHAT IS CLAIMED IS:

1. A method for stabilizing an intervertebral joint between adjacent first and second vertebral bodies from a posterior approach, the method comprising:
  - forming an implant bore between said adjacent first and second vertebral bodies for receiving an intervertebral implant;
  - inserting an intervertebral implant into said implant bore; and
  - mounting external stabilization to said first and second vertebrae.
2. The method according to claim 1 wherein said external stabilization comprises bilateral stabilization.
3. The method according to claim 1 wherein said step of mounting external stabilization comprises anchoring a first pedicle screw into said first vertebral body and a first pedicle screw into said second vertebral body.
4. The method according to claim 3 further comprising a step of fixing a connecting rod to said first pedicle screws to stabilize said first and second vertebral bodies.
5. The method according to claim 4 wherein the pedicle screws and rod are anchored on the side of the vertebrae contralateral to the side from which the implant is inserted.
6. The method according to claim 1 wherein said first and second vertebral bodies each have a first lateral side and a second lateral side on opposite sides of a sagittal plane passing through a midline of said first and second vertebral bodies, wherein the intervertebral implant has a longitudinal axis and is inserted into said implant bore with the longitudinal axis of said intervertebral implant oriented oblique to said sagittal plane.

7. The method according to claim 3 further comprising a step of inserting a second pedicle screw into said first vertebral body and a second pedicle screw into said second vertebral body and fixing a connecting rod to said second vertebral bodies.
8. The method according to claim 1 further comprising a step of tapping threads into said implant bore for threadedly receiving said implant.
9. The method according to claim 3 wherein said pedicle screws are anchored in a pedicle canal of said first and second vertebral bodies, respectively.
10. The method according to claim 1 further comprising a step of removing a portion of a facet joint of said first vertebral body.
11. The method according to claim 1 further comprising a step of performing a partial laminectomy on said first vertebral body.
12. The method according to claim 3 wherein said first pedicle screws are anchored before forming said implant bore.
13. The method according to claim 1 wherein said intervertebral implant is bone.
14. The method according to claim 1 wherein said intervertebral implant is non-bone.
15. The method according to claim 1 wherein said first and second vertebral bodies are distracted before forming said implant bore.
16. The method according to claim 15 wherein said first and second vertebral bodies are distracted by a distractor over which an instrument guide is passed.

17. The method according to claim 1 wherein said implant bore is formed by a drill passed through an instrument guide.
18. The method according to claim 17 wherein said instrument guide comprises:
  - a tube having a longitudinal axis passing through a lumen of said tube at least partially surrounded by a wall, said wall having a proximal end and a distal end;
  - said distal end of said wall having a distal edge, said distal edge having an angle of about 10° to about 45° relative to said longitudinal axis.
19. The method according to claim 18 wherein said tube further includes at least one paddle extending from said distal edge of said wall.
20. A surgical procedure for stabilizing an intervertebral joint between adjacent first and second vertebral bodies, said first and second vertebral bodies each having a first lateral side and a second lateral side on opposite sides of a sagittal plane passing through a midline of said first and second vertebral bodies, the procedure comprising:
  - anchoring a first pedicle screw into said first lateral side of said first vertebral body;
  - anchoring a first pedicle screw into said first lateral side of said second vertebral body;
  - forming an implant bore between said adjacent first and second vertebrae for receiving an intervertebral implant; and
  - inserting an intervertebral implant having a longitudinal axis into said implant bore, said longitudinal axis of said intervertebral implant oriented oblique to said sagittal plane.
21. The method according to claim 20 further comprising fixing a connecting rod to

said first pedicle screw of said first vertebral body and said first pedicle screw of said second vertebral body to stabilize said first and second vertebral bodies.

22. The method according to claim 21 wherein said step of fixing said connecting rod to said first pedicle screws to stabilize said first and second vertebral bodies is performed before forming said implant bore.
23. The method according to claim 20 wherein said implant bore has a longitudinal bore axis and said bore axis is formed at an angle oblique to said sagittal plane, said oblique angle being about 10° to about 45°.
24. The method according to claim 23 wherein said oblique angle is approximately 22° degrees to said sagittal plane.
25. The method according to claim 20 wherein said first and second vertebral bodies are distracted before forming said implant bore.
26. The method according to claim 20 further comprising:
  - anchoring a second pedicle screw into said second lateral side of said first vertebral body;
  - anchoring a second pedicle screw into said second lateral side of said second vertebral body; and
  - fixing a connecting rod to said second pedicle screw of said first vertebral body and said second pedicle screw of said second vertebral body.
27. A method for stabilizing an intervertebral joint between adjacent first and second vertebral bodies from a posterior approach, the method comprising:
  - distracting said first and second vertebral bodies;
  - forming an implant bore between said adjacent first and second vertebral

- bodies for receiving an intervertebral implant;
  - inserting an intervertebral implant into said implant bore; and
  - mounting external stabilization to said first and second vertebrae comprising anchoring a first pedicle screw into said first vertebral body and a first pedicle screw into said second vertebral body.
28. An instrument guide for guiding surgical instruments, the instrument guide comprising:
- a tube having a longitudinal axis passing through a lumen of said tube, said lumen at least partially surrounded by a wall, said wall having a proximal end and a distal end;
  - said distal end of said wall having a distal edge, said distal edge having an angle of about 10° to about 45° relative to said longitudinal axis; and
  - at least one paddle extending from said distal edge of said wall.
29. The instrument guide according to claim 28 wherein said lumen is surrounded by said wall.
30. The instrument guide according to claim 28 comprising first and second diametrically opposed paddles.
31. The instrument guide according to claim 28 wherein each of said at least one paddles include a tapered distal end.
32. The instrument guide according to claim 28 wherein said lumen is sized to receive a distraction plug.
33. The instrument guide according to claim 28 wherein said distal edge has an angle of about 22° relative to said longitudinal axis.



- (ii) said distal end of said wall having a distal edge, said distal edge having an angle of about 10° to about 45° relative to said longitudinal axis; and
- (iii) at least one paddle extending from said distal edge of said wall; and
- a distractor.

38. The kit according to claim 37 wherein said distal edge of said instrument guide has an angle of about 22° relative to said longitudinal axis.

39. The kit according to claim 37 wherein said distractor is a distracting plug.

40. The kit according to claims 37 wherein said distractor is a wedge distractor.

41. The kit according to claim 37 further comprising a boring tool.

42. The kit according to claim 37 further comprising an external vertebral stabilization device.

43. The kit according to claim 42 wherein the external vertebral stabilization device comprises two or more pedicle screws and at least one rod.

44. A kit for preparing an implant site for receiving an implant between adjacent first and second vertebrae, the kit comprising:

- an instrument guide, said instrument guide comprising:
  - (i) a tube having a longitudinal axis passing through a lumen of said tube, said lumen at least partially surrounded by a wall, said wall having a proximal end and a distal end;
  - (ii) said distal end of said wall having a distal edge, said distal edge having an angle of about 10° to about 45° relative to said

- longitudinal axis; and
  - (iii) at least one paddle extending from said distal edge of said wall;
  - a distracting plug; and
  - an external vertebral stabilization device.
45. The kit according to claim 44 wherein said distal edge of said instrument guide has an angle of about 22° relative to said longitudinal axis.
46. The kit according to claim 44 further comprising a boring tool.
47. The kit according to claim 44 wherein the external vertebral stabilization device comprises two or more pedicle screws and at least one rod.
48. A kit for preparing an implant site for receiving an implant between adjacent first and second vertebrae, the kit comprising:
- an instrument guide, said instrument guide comprising:
    - (i) a tube having a longitudinal axis passing through a lumen of said tube, said lumen at least partially surrounded by a wall, said wall having a proximal end and a distal end;
    - (ii) said distal end of said wall having a distal edge, said distal edge having an angle of about 22° relative to said longitudinal axis; and
    - (iii) at least one paddle extending from said distal edge of said wall;
  - a distracting plug; and
  - an external vertebral stabilization device comprising two or more pedicle screws and at least one rod.
49. The kit according to claim 48 further comprising a boring tool.
50. A kit for preparing an implant site for receiving an implant between adjacent



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51. The kit according to claim 50 wherein said distal edge of said instrument guide has an angle of about 22° relative to said longitudinal axis.
52. The kit according to claim 50 further comprising a distractor.
53. The kit according to claim 52 wherein said distractor is a distracting plug.
54. The kit according to claims 52 wherein said distractor is a wedge distractor.
55. The kit according to claim 50 further comprising a boring tool.
56. The kit according to claim 50 wherein said external vertebral stabilization device comprises two or more pedicle screws and at least one rod.
57. A kit for preparing an implant site for receiving an implant between adjacent first and second vertebrae, the kit comprising:
  - an instrument guide, said instrument guide comprising:
    - (i) a tube having a longitudinal axis passing through a lumen of said

- tube, said lumen at least partially surrounded by a wall, said wall having a proximal end and a distal end;
    - (ii) said distal end of said wall having a distal edge, said distal edge having an angle of about 10° to about 45° relative to said longitudinal axis; and
    - (iii) at least one paddle extending from said distal edge of said wall; and
  - an external vertebral stabilization device comprising two or more pedicle screws and at least one rod.
- 58. The kit according to claim 57 wherein said distal edge of said instrument guide has an angle of about 22° relative to said longitudinal axis.
- 59. The kit according to claim 57 further comprising a distractor.
- 60. The kit according to claim 59 wherein said distractor is a distracting plug.
- 61. The kit according to claims 59 wherein said distractor is a wedge distractor.
- 62. The kit according to claim 57 further comprising a boring tool.
- 63. A kit for preparing an implant site for receiving an implant between adjacent first and second vertebrae, the kit comprising:
  - an instrument guide, said instrument guide comprising:
    - (i) a tube having a longitudinal axis passing through a lumen of said tube, said lumen at least partially surrounded by a wall, said wall having a proximal end and a distal end;
    - (ii) said distal end of said wall having a distal edge, said distal edge having an angle of about 22° relative to said longitudinal axis; and

- (iii) at least one paddle extending from said distal edge of said wall;
- a distractor; and
- an external vertebral stabilization device comprising two or more pedicle screws and at least one rod.

- 64. The kit according to claim 63 wherein said distractor is a distracting plug.
- 65. The kit according to claims 63 wherein said distractor is a wedge distractor.
- 66. The kit according to claim 63 further comprising a boring tool.